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The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/710,259  
Filing Date: June 29, 2004  
Appellant(s): NAGI ET AL.

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John Artz  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 11 September 2008 appealing from the Office action mailed 8 April 2008.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. Appellant has made typographical errors in the patent listing of Hiroi et al. (U.S. Patent 7,303,719), instead of the listed "Hiroi et al. (USP 7,303,710)".

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

|           |               |         |
|-----------|---------------|---------|
| 7,303,719 | Hiroi et al.  | 12-2007 |
| 5,500,166 | Sasaki et al. | 05-1996 |
| 4,447,372 | Kreuttner     | 05-1984 |

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 3, and 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. (U.S. Patent 5,500,166), in view of Kreuttner (U.S. Patent 4,447,372), further in view of Hiroi et al. (U.S. Patent 7,303,719). Regarding Claim 1, Sasaki et al., hereafter "Sasaki," show that it is known to carry out a method for plastic injection molding (Abstract) comprising providing a mold cavity to form a plastic molded part with a predetermined surface area and injecting a quantity of plastic material into said mold cavity (Column 10, lines 6-7), wherein the quantity of material injected into the mold cavity is less than the full amount to fill the mold cavity (Column 17, lines 25-35; It is interpreted that since the mold cavity which the resin is injected into is larger than the size of the final part, the amount of plastic injected into the mold cavity will be less than the initial cavity volume.); moving a piston member in the cavity in order to reduce the cross section of the mold cavity (Column 11, lines 41-54), wherein said step of reducing the cross section of the mold cavity operates to completely fill the mold cavity with plastic material (Column 11, lines 50-54); allowing the plastic material to cool in the mold cavity (Column 12, lines 18-19); and ejecting the molded part from the mold cavity (Column 12, lines 27-29; It is noted that "formation of the knit lines is minimized is only an intended consequence of the claimed process. Since all the process steps have been met, it is interpreted that this minimization of knit lines will implicitly be met as well.). Sasaki does not specifically show reducing the cross section of the mold cavity at least 50% and a method wherein the molded part has thin walled sections at least 50% of its surface area. However, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation (See MPEP 2145.05 (II)(A)). Therefore, It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to reduce the cross section by any applicable amount, such as that claimed, during Sasaki's molding method in order to produce an article which meets exclusive customer specifications. Sasaki does not show reducing the cross section of the mold cavity using a piston member in the cavity. Kreuttner shows that it is known to carry out a

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method wherein the cross section of the mold cavity is reduced by movement of a piston member in the mold cavity (Column 3, lines 3-30, 54-59). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Kreuttner's pistons in the mold cavity during Sasaki's molding process in order to produce an article with a specific desired surface. Sasaki does not show selected compression of his product. Hiroi et al., hereafter "Hiroi," show that it is known to carry out an injection compression process wherein only selected areas are compressed, and the cross section of the article is not reduced in at least one area where structural support is needed for subsequent mounting of an accessory member (Figure 2, boss area 2 is not compressed). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Hiroi's selective compression step during Sasaki's molding process in order to maintain the stability and strength of a molded article in structural support areas while allowing compression and the advantages therewith of other areas.

Regarding Claim 3, Sasaki shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not specifically show reducing the cross section of the mold cavity at least 75%. However, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation (See MPEP 2145.05 (II)(A)). Therefore, It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to reduce the cross section by any applicable amount, such as that claimed, during Sasaki's molding method in order to produce an article which meets exclusive customer specifications.

Regarding Claim 6, Sasaki shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show two piston members in the mold cavity. Kreuttner shows that it is known to carry out a method wherein said cross section of the mold cavity is reduced by movement of at least two piston members in the mold cavity (Figure 4, elements 1, 2, 8). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Kreuttner's pistons

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in the mold cavity during Sasaki's molding process in order to produce an article with a specific desired surface.

Regarding Claim 7, Sasaki shows the process as claimed as discussed in the rejection of Claim 6 above, but he does not show two piston members in the mold cavity. Kreuttner shows that it is known to carry out a method wherein the at least two piston members are positioned in the same side of the mold cavity (Figure 4, elements 2, 8). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Kreuttner's pistons in the mold cavity during Sasaki's molding process in order to produce an article with a specific desired surface.

Regarding Claim 8, Sasaki shows the process as claimed as discussed in the rejection of Claim 6 above, but he does not show two piston members in the mold cavity. Kreuttner shows that it is known to carry out a method wherein the at least two piston members are positioned opposed to one another in said mold cavity (Figure 4, elements 1, 2). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Kreuttner's pistons in the mold cavity during Sasaki's molding process in order to produce an article with a specific desired surface.

Regarding Claim 9, Sasaki shows the process as claimed as discussed in the rejection of Claim 1 above, including a method further comprising the step of ejecting the molded part comprises opening the mold and removing the molded part (Column 12, lines 19-40), meeting applicant's claim.

Regarding Claims 10 and 11, Sasaki shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein the cross section of the mold cavity is reduced to provide a part with a certain wall thickness (Column 41-67). Although Sasaki does not particularly discuss the claimed wall thickness value, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation (See MPEP 2145.05 (II)(A)). Therefore, It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to reduce the cross section to a wall thickness such as that claimed during Sasaki's molding method in order to produce an article which meets exclusive customer specifications.

**(10) Response to Argument**

Regarding Claim 1, appellant generally argues that “Neither of the primary references provide even a prima facie showing of the basic method as set forth in claim 1. Neither disclose or suggest a moveable piston member in a mold cavity for creating thinner sections or portions in a plastic molded product in order to utilize less material and save molding time and expense.” This is not persuasive for several reasons.

First, since appellant does not specifically point out how the language of the claims patentably distinguishes them from the references, this argument amounts to a general allegation that the claims define a patentable invention.

Second, there is only one primary reference, Sasaki, so it is unclear what applicant is exactly arguing by saying “neither of the primary references...”. Sasaki was not cited to show a moveable piston in a mold cavity. The secondary reference, Kreuttner, was cited to show this feature and does so in Figures 3 and 4 and also at Column 3, lines 3-32 and 54-59.

Third, although appellant has argued that the prior art of record does not show a “moveable piston member in a mold cavity for creating thinner sections or portions in a plastic molded product in order to utilize less material and save molding time and expense”, the claim does not require any intended uses such as utiliz[ing] less material and sav[ing] molding time and expense.

Fourth, it is not clear which aspects of the statement “moveable piston member in a mold cavity for creating thinner sections or portions in a plastic molded product in order to utilize less material and save molding time and expense” applicant is arguing in particular, since no further discussion is provided to show similarities or differences between this claim stanza and what is taught by the prior art. It is maintained that Sasaki, Kreuttner, and Hiroi would be reasonably combined to suggest the claimed invention.

Appellant discusses the tertiary reference, Hiroi, but not with any specificity relative to the claimed movable piston member in a mold cavity, as discussed above. Appellant merely alleges that Hiroi would only be combined with Sasaki and Kreuttner after hindsight. In response to applicant's argument that the examiner's conclusion of

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obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Regarding Claims 3, and 6-11, appellant appears to argue that the rejection of these claims is improper in view of the alleged deficiencies of the rejection of Claim 1. These alleged deficiencies are discussed above as nonpersuasive. It is maintained that Claims 3 and 6-11 are properly suggested by the prior art as noted in section 9 of this Answer.

Specifically, regarding Claims 6, 8, and 10, since appellant does not specifically point out how the language of the claims patentably distinguishes them from the references, this argument amounts to a general allegation that the claims define a patentable invention.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Monica A Huson/

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/Jennifer Michener/

QAS, TC1700



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